REMARKS

This Amendment is in response to the Office Action of October 8, 2004. In the Office Action, the Examiner indicated that Claims 1-51 are pending, Claims 1-38 and 50 are allowed, Claims 39, 42, 44, 48 and 51 are rejected, and Claims 40, 41, 43, 45-47 and 49 are objected to, but allowable if rewritten in independent form. With this Amendment, Claims 39, 40, 42, 48, 49 and 51 are amended, and Claims 39-49 and 51 are presented for reconsideration and allowance along with previously allowed Claims 1-38 and 50.

Claims Objected to but Allowable

With this Amendment, the objected-to Claims 40 and 49 that were indicated to be allowable have been rewritten to be in independent form. Withdrawal of the objections and allowance of Claims 40 and 49 is therefore requested.

Amendments to Rejected Claims

Also with this Amendment, the rejected Claims 39, 42, 48 and 51 have each been amended to clarify that the reinforcement element comprises a band that inhibits dilation, in order to better clarify the reinforcement element from the art cited. Support for these amendments to claims 39, 42, 48 and 51 can be found at least on page 13, line 30.

Claim 39

The Examiner rejected Claim 39 under 35 U.S.C. §102(b) over Duran (U.S. Patent No. 5,545,215). The Examiner cited FIG. 9 of Duran that shows a frame or stent 20 that the Examiner considered to be the claimed reinforcement element.

Claim 39, as presently amended, includes a limitation to the reinforcement element comprising a band that is circumferentially attached to inhibit dilation of a conduit. Duran does not teach such a band. The frame or stent 20 shown in Duran has

circumferential outer edges that are irregular along the length of the conduit because the corresponding inner edges are shaped to fit around the bulges of the sinuses of Valsalva. The longitudinally irregular circumferential outer edges shown in Duran restrain dilation of an adjoining conduit circumference. The adjoining conduit circumference in Duran is generally ring-shaped, however, the frame 20 of Duran is not ring-shaped but has the longitudinally irregular shape as illustrated in FIG. 9 of Duran. The mismatch between the generally ring shape of the adjacent conduit and the irregular shape of the frame 20 results in stress concentrations when the adjoining conduit is pressurized with blood. The stress concentrations increase the risk that a weak portion of the adjoining conduit will tear under pressure at the locations of the stress concentrations.

In the invention as presently claimed in Claim 39, the reinforcement element comprises a band. A band has a circumferential ring shape that matches the generally ring shaped conduit, avoiding stress concentrations and avoiding increased risk of tearing under pressure of a weak portion of an adjacent conduit. This feature is not disclosed by Duran. Claim 39, as presently amended, is thus believed to be novel over Duran. Withdrawal of the rejection of Claim 39 under 35 USC 102(b) is therefore requested.

Claims 42, 44, 51

The Examiner rejected Claims 42, 44 and 51 under 35 U.S.C. §102 (b) over Klostermeyer, et al. (U.S. Patent No. 5,891,195). The Examiner cited FIG. 3 of Klostermeyer as showing a circumferential ring 52 in a groove 50 that the Examiner considered to be a reinforcement element as claimed in Claims 42, 44 and 51.

The "reinforcement element" as presently claimed in claims 42, 44 and 51 is explicitly recited in each of Claims 42, 44 and

51 to be a reinforcement element that limits dilation of the conduit.

As pointed out in Klostermeyer at column 4, lines 9-14,

> The third groove 50 captures the vascular graft 18 between the stiffening ring 34 and the annular body 20, thus providing a sharp, non-stitched transition between the heart valve and the graft. A third circumferential ring 52 is placed within the third groove 50 to capture a proximal end 54 of the graft.

Since ring 52 is placed within the third groove 50 in FIG. 3 of Klostermeyer, it can be seen that the function of the ring 50 is not to limit dilation, but rather to become expanded or dilated so that ring 52 engages the groove 50 to capture the end of graft 18 and prevent axial slippage between Klostermeyer's conduit 12 and sewing ring 16. Klostermeyer's capture to prevent axial slippage is not the same as the claimed band that limits dilation.

Klostermeyer does not disclose a reinforcement element that comprises a band that limits dilation of a conduit as presently claimed in amended Claims 42 and 51. Claims 42, 44 and 51, as presently amended, each includes a limitation to a reinforcement element comprising a band that is attached or positioned to inhibit or limit dilation. Claims 42, 44 and 51, as presently amended, are thus believed to be novel over Klostermeyer. Withdrawal of the rejection of Claims 42, 44 and 51 under 35 USC 102(b) is therefore requested.

Claim 48

The Examiner rejected Claim 48 under 35 U.S.C. §102 (b) over Fogarty, et al. (U.S. Patent No. 5,824,037). The Examiner cited FIG. 3 of Fogarty and apparently considered this Figure 3 to be

anticipatory of Claim 48.

Claim 48, as presently amended, includes a limitation to the reinforcement element comprising a band that is circumferentially attached to inhibit dilation of a conduit. Fogarty does not disclose a band. FIG. 3 of Fogarty illustrates overlapping irregular circumferential ends (at couplings 74, 76) of a distal cuff module 62, a tapered prosthetic module 64, and a proximal cuff module 66. The irregular overlapping ends shown in Fogarty may restrain dilation to some degree, however the ends are not ring-shaped but have an irregular shape as illustrated in FIG. 3 of Fogarty. The mismatch between the generally ring shape of the adjacent conduit an the irregular shape of the ends results in stress concentrations at the irregular edges in the adjoining conduit which increases the risk that a weak portion of the adjoining conduit will tear due to the stress concentrations.

In the invention as presently claimed in amended Claim 48, the reinforcement element comprises a band. The band has a circumferential shape that matches the generally ring shaped conduit, avoiding stress concentrations and avoiding increased risk of tearing a weak portion of an adjacent conduit. This feature is not disclosed by Fogarty. Claim 48, as presently amended, is thus believed to be novel over Fogarty. Withdrawal of the rejection of Claim 48 under 35 USC 102(b) is therefore requested.

Claims 1-51 are thus believed to be in condition for allowance and favorable action is requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' attorney of record, Hallie A. Finucane at (612) 330-0587.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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